Pushing the Envelope			
2010 Science			
Academic Content Standards			
Ohio Science			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Types of Engines (pgs. 11-23)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Types of Engines (pgs. 11-23)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Physics and Math (pgs. 43-63)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Physics and Math (pgs. 43-63)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Rocket Activity (pgs. 69-75)	OH	SCI.8.PS.1.2.b	Forces can be added. The net force on an object is the sum of all of the forces acting on the object. The net force acting on an object can change the object's direction and/or speed.
Rocket Activity (pgs. 69-75)	OH	SCI.8.PS.1.2.c	When the net force is greater than zero, the object's speed and/or direction will change. When the net force is zero, the object remains at rest or continues to move at a constant speed in a straight line.
Pushing the Envelope			
2010 Science			
Academic Content Standards			
Ohio Science			
Grades 9-12 (Physical Science)			
Activity/Lesson	**State**	**Standards**	
Types of Engines (pgs. 11-23)	OH	SCI.9-12.2.1	Motion of an object is a measurable quantity that depends on the observer's frame of reference and is described in terms of position, speed, velocity, acceleration and time.
Physics and Math (pgs. 43-63)	OH	SCI.9-12.2.2	An object does not accelerate (remains at rest or maintains a constant speed and direction of motion) unless an unbalanced net force acts on it. The rate at which motion changes (speed or direction) is proportional to applied force and inversely proportional to the mass. A force is an interaction between two objects; both objects in the interaction experience an equal amount of force, but in opposite directions.

Rocket Activity (pgs. 69-75)	OH	SCI.9-12.2.2	An object does not accelerate (remains at rest or maintains a constant speed and direction of motion) unless an unbalanced net force acts on it. The rate at which motion changes (speed or direction) is proportional to applied force and inversely proportional to the mass. A force is an interaction between two objects; both objects in the interaction experience an equal amount of force, but in opposite directions.
Pushing the Envelope			
2010 Science			
Academic Content Standards			
Ohio Science			
Grades 9-12 (Physics)			
Activity/Lesson	**State**	**Standards**	
Physics and Math (pgs. 43-63)	OH	SCI.9-12.2.1	Explain the movement of objects by applying Newton's Laws with balanced forces
Physics and Math (pgs. 43-63)	OH	SCI.9-12.2.2	Explain the movement of objects by applying Newton's Laws with unbalanced forces
Rocket Activity (pgs. 69-75)	OH	SCI.9-12.2.1	Explain the movement of objects by applying Newton's Laws with balanced forces
Rocket Activity (pgs. 69-75)	OH	SCI.9-12.2.2	Explain the movement of objects by applying Newton's Laws with unbalanced forces